

Let the parish or the public buy the property at its just value, the bare "pound of flesh," and let it be sold again to the adjoining owner, if he please to take it, or be otherwise converted to some useful purpose. If the Government have not sufficient moral courage to enable them thus to look the difficulty boldly in the teeth, to grapple with it, and to strangle it; let them adopt the other course, and legislate so as to palliate the evil as much as possible.

It must be a very desperate case indeed which admits of no ventilation. A very simple one which occurs to me, is the formation of a lantern-light, with swing sashes, over every staircase; and let the landlord or his agent be compelled to see these sashes opened every morning; and, as to the privies, let them be decently enclosed, covered with a stone cistern, and have them flushed out every week, under superintendence of the police; and in those vilest cases, where no decent enclosure can be put, take the bull by the horns, pull down one of the houses, and convert its site into a court-yard, with one privy for each house, the whole covered with cisterns for a similar purpose; and, if there be no sewer, render it obligatory upon the Commissioners of Sewers to build one at the earliest possible period.

This part of the subject has led me to advert to the principle of compensation; and I may for a moment request your notice of this curious circumstance, that, although *alleys* (the drawer of the clause must have been strangely at loss for an appropriate term) are not to be made less than twenty feet in width, this bill will not only not lead to the voluntary widening of any one alley in the whole metropolis, but will to the utmost extent prevent it, by forcing the owners, by hook or by crook, to keep the property in such a state of stability as that it shall never need to be taken down,—burnt down it may be; and it is also curious, that while, in process of time, it will destroy the best and fairest property, I have been informed of at least one case, in which some of the most wretched will not be touched by a single clause in the whole bill.

I cannot but think, Sir, that if, instead of cutting new streets through thriving and industrious neighbourhoods, and destroying the marts of peculiar trades, and building smart-looking houses upon heavy ground-rents, and in which the tenants, in too many cases, at the year's end, barely escape with the skin of their teeth; the coal duty or any other duty, were to be charged with the cost of widening to a workable extent, the narrow, densely-peopled lanes, courts, and alleys, and, in mere stern justice, divested of any liberality, compensating the owners, a much greater and more enduring good would be achieved.

Be this so or not, the plain, common rule of fair-dealing between man and man, the heavenly charge, "Do unto others as you would have others do unto you," distinctly indicates that the introduction of the principle of compensation, in all cases wherein wrong may be done in carrying out a righteous object, is absolutely necessary, or—the wrong must not be done.

If you, Sir, deem this letter worthy of the consideration of the public, I may follow it by other remarks upon the principle of rating and its effect, and upon the structural details; for in these, as in the more general regulations, it is much to be regretted that no care appears to have been taken practically to enter into the questions of difficulty or advantage, but, slumberingly, to take up with some nice, gentlemanly, Utopian, abstract sort of notions, as to what is good to be done, rather than what could practically and uninjuriously be done.

A BRICKBAT.

TO THE EDITOR OF THE BUILDER.

SIR,—In your useful publication of last week is a paragraph, under the title of "Royal Institution," containing a notice of Mr. Faraday's Lecture on Light and Ventilation, delivered on the 7th of April, 1843. I have before me a Parliamentary Report of a Select Committee of the House of Commons, authorized by parliament in 1835, to examine such eminent scientific men, as from whom they might obtain the requisite information for warming and ventilating the New Houses of Parliament. Mr. Faraday was amongst the gentlemen examined, and he candidly confessed that he could give no advice how to secure pure ventilation, and he did not know a single room well warmed and ventilated. I should therefore very much like to see a more complete report of his lecture, as Mr. F. had formerly so honestly stated that he had no knowledge of the science requisite to direct the ventilation of rooms with certainty. Mr. Faraday, as well as Mr. Brande, told the committee, that all attempts to warm and ventilate the Royal Institution had entirely failed; and they, as well as several other scientific men, advised the committee to make experiments. Mr. Faraday said that only an architect sufficiently acquainted with chemistry and natural philosophy would be able to

discover the science required; as at present, science had not arrived so high as to warm and ventilate perfectly. Sir Robert Smirke, the only person who, through numerous experiments, had arrived at this point, to ventilate buildings perfectly (without however knowing it), advised the committee to have a building erected for the very purpose of making experiments on warming and ventilation. At the same time, one of the members of the above-mentioned committee had, through the introduction of an M.P., a baronet, learned that a Mr. F. A. Bernhardt, architect, had taken out a patent for a new plan, discovered by him, for warming and ventilating buildings, and had put up the said plan in his own house for inspection. The said M.P. (Sir Hanbury Tracy) went to the said house, examined the ventilation very minutely, and was surprised at seeing the action of the ventilation with open doors and windows, as perfect as with closed doors and windows. To confirm the truth of what he had seen, he repeated the examination in company with his son, Mr. Tracy. After the second examination, Sir H. Tracy, as well as his son, was perfectly satisfied, and Mr. Tracy repeated his visit in company with the other commissioners selected to choose the best plan for the new Houses of Parliament. One of the commissioners was his father; the others were Sir Edward East, Mr. Little, and Mr. Vivian; and after the approval of the said commissioners the ventilation discovered and patented by Mr. Bernhardt, Sir E. Tracy introduced Mr. Bernhardt to the committee. The said M.P. (Sir Hanbury Tracy) mentioned Mr. Bernhardt's name is not mentioned in the printed report; and Mr. Percival, the editor of the *Polytechnic Journal*, in the said journal, No. 1, page 78, says,—"Mr. Bernhardt attended a committee of the House of Commons, in order to be examined touching the adoption of his plan, in the new Houses of Parliament. No doubt existed in the minds of the members of that committee that the architect was able to do what he said he could. He was, however, asked for his secret. Now, his secret was his bread, for which moreover, he had paid the price of an English patent. Declining to make it known, he was consulted; as indeed he would have been by jobbery, had he made it known. The result is, that a man who has discovered the means of decomposing smoke before it leaves the chimney, is left to pine under the withering malaria of public neglect; and that the new Houses of Parliament are to be crowned with chimney-pots." Sir, I was present when a member of her Majesty's secret council, a nobleman of high rank, examined Mr. Bernhardt's ventilation plan, and I heard the noble lord say, "I have found every thing exceedingly satisfactory: I hope you will be the means of improving our atmosphere." These words were addressed to Mr. Bernhardt, on his leaving the house. Sir, I was present when Mr. Charles Barry, architect, examined the Earl of Lovelace's house, where Mr. Bernhardt's ventilation plan was in operation, and I heard the following words from Mr. Barry, when addressing the honourable Mr. Grey and other noblemen and gentlemen present at the time. He said, "Gentlemen, this is the most perfect plan for warming and ventilating buildings I have seen; and I will introduce the same in all buildings I have to build." Mr. Barry had just begun to build the new mansion for Mr. Currie, M.P., at East Horsley, and introduced the said plan in the building, where it proved as perfect and as much to the satisfaction of Mr. Currie as to Mr. Barry. Sir, I was present when Dr. Grant, an architect from Camberwell, Mr. Loudon, and several other gentlemen, examined Mr. Bernhardt's patent ventilation, in the dining and committee rooms in the House of Commons. This happened in April, 1838. Mr. Bernhardt shewed the said parties, that the atmosphere in one of the said rooms, about 8,000 cubic feet of air could be changed every five minutes; so that when the thermometer shewed 60° Fahrenheit, five minutes after only 50°, and so it was changed every five minutes. A waiter of Mr. Bellamy told the gentlemen that the cold ventilation was very advantageous for keeping the roast or boiled meat in a wholesome condition, and they made use of the dining-rooms for the said purpose when the members were absent.

This system of ventilating will be of great advantage to butchers, as well as to the public at large. The architect from Camberwell was much pleased, and said, "a better plan could not be found than this, to warm and ventilate churches, and he was sorry that the public were not made acquainted with Mr. Bernhardt's plan, through the medium of advertisements." He asked Mr. B. if he would allow him to form a company, assuring him that this was the best way to make his plan useful to the community. It is much to be regretted that the said architect was shortly after engaged by the former government, and thereby prevented forming the intended company. It is most cruel that the public have been deceived by writers and lecturers, with experiments on ventilation, without the requisite science, and that the public should be deprived of a wholesome and economical plan of warming

and ventilating by ignorant persons in power under the former government. A more simple, more effective, or more economical plan, for warming and ventilating buildings cannot be discovered. There is no necessity for keeping a fire to create a draught. There is no machinery whatever required. Nature acts like a *perpetuum mobile*, day and night, summer and winter, uninterruptedly, whether the atmosphere be calm or stormy, or the temperature be high or low; and the discoverer of this useful science has said, that upon the plan introduced under his direction, it must necessarily act uniformly in every building, and with the same certainty in the worst situation of the building. Mr. Bernhardt says, there is no necessity for a manufactory creating noxious smells to be placed at a distance from other buildings, as mentioned in the new Building Act; but it is only requisite to possess the science of perfect ventilation, that is, it is indispensable to know the physical, chemical, and mechanical powers of nature, controlling the atmosphere and heat. Persons well acquainted with those laws, the materials constituting the atmosphere, and the combined action of these materials when united, are able to ventilate such buildings, as soap-boileries and other manufactories creating smells, in such manner, that the inhabitants of such buildings will not find the least difference between their buildings and others, except to the workmen engaged in the said business. The annexed letter from Dr. Grant will suffice to corroborate the foregoing statement respecting the perfection of the said ventilation; but the patentee has also stated, that had he been permitted to execute his plans freely, as others have been, he would have completed such plans without experiment, and secured ventilation equal in power to that produced with a fire-grate eleven feet in diameter, without, however, any fire or machinery, or any cows upon the building. But Mr. Barry told Mr. Bernhardt that the Commissioners of Woods and Forests would not allow such expenses, as the said committee and dining rooms were only temporary.

Mr. Editor, as it is your intention to patronize useful science, and make the public acquainted with plans adapted to improve their health and general comfort, I hope you will excuse the length of this communication, and give early insertion to such portion, as you may judge suitable for your paper.

I remain most respectfully, yours, &c.
A FRIEND OF SCIENCE.

May 24, 1843.

COPY OF DR. GRANT'S LETTER TO MR. F. A. BERNHARDT, ARCHITECT.

SIR,—I was much gratified on Saturday last, in witnessing your mode of warming and ventilating rooms at the Speaker's house. The feeling of warmth and dryness of the rooms is particularly agreeable, and from your simple, but excellent plan, of keeping a constant renewal of the air, without producing draughts, must be greatly conducive to its purity and wholesomeness. Your plan of regulating the supply of warm and cold air seems to be excellent; and as one of the chief causes of foulness of the air in crowded rooms is the quantity of carbonic acid gas thrown off from the lungs of those breathing in the room, your method of causing this (which being heavier than air, falls to the bottom) to be carried off by holes at the bottom of the room, is good, and certainly more likely than any other I have seen to produce the effect of keeping the air in the room wholesome. I shall be very glad to hear of the general adoption of your plan, and in the meantime remain, &c.

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Miscellaneous.

THE LATE OUTRAGE AT MANCHESTER.—There were no fewer than twenty-three bricklayers arrested at Manchester on suspicion of having been concerned in the late outrageous attack on Messrs. Pauling & Henfrey'scroft, and after an investigation, which lasted nearly four days, eight of them were committed on the evening of Monday last, before Mr. Maude, to take their trial at the next Liverpool assizes. Six others have been remanded, to afford time for further evidence to be obtained against them. The authorities are apprehensive lest another attack should be made upon the croft, but measures have been taken by them to secure the public peace in case of a similar outbreak. It appears that most of those who were arrested on this occasion belonged to a union called the Brickmakers' Operative Association, which held its meetings at a public-house in Manchester every Saturday night.

The new churches in Kentish Town, Brookfield, and Turk's Row, Chelsea, will be commenced very shortly; the designs for the two former, especially that for Brookfield, are very good, and we believe the plan for the new church at Chelsea has some pretension to rank as an ecclesiastical edifice.